

IN THE CLAIMS

1 (Currently Amended). A method comprising:

exposing a contact plug fill to an etching solution; and

exposing the surface of said contact plug fill to an electrical charge using voltage contrast-based defect inspection, determining if the region under the contact plug fill is etched away.

2 (Original). The method of claim 1 including exposing the contact plug fill to a basic solution.

3 (Original). The method of claim 1 including exposing the contact plug fill to a solution that preferably etches along the <111> crystallographic orientation

4 (Original). The method of claim 1 including using an etching solution that etches a characteristic etch pattern under the contact plug fill if the contact plug fill is defective.

Claims 5-7 (Canceled).

8 (Currently Amended). The method of claim 1 § including determining which contact plug fill dissipates surface charge and which contact plug fill does not dissipate surface charge.

9 (Original). A method comprising:

forming a conductive material in an aperture in a dielectric layer; and

applying an etching solution to said conductive material to determine whether the conductive material is defective.

10 (Original). The method of claim 9 including exposing a contact plug fill to an etching solution.

11 (Original). The method of claim 9 including applying an etching solution which characteristically etches underneath the conductive material if the conductive material is defective.

12 (Original). The method of claim 9 including applying a basic solution to said conductive material.

13 (Original). The method of claim 9 wherein applying an etching solution includes exposing the conductive material to a solution that preferentially etches along the <111> crystallographic direction.

14 (Original). The method of claim 12 including applying an etching solution that etches a V-shaped trench under a defective conductive material.

15 (Original). The method of claim 9 including exposing the surface of said conductive material to an electric charge.

16 (Original). The method of claim 15 including using voltage contrast-based defect inspection.

17 (Original). The method of claim 9 including applying a contact to said conductive material.

18 (Original). The method of claim 17 including using electrical testing to determine if said conductive material is defective.

19 (Original). The method of claim 15 including using a secondary electron image to determine if said conductive material is defective.

20 (Currently Amended). A method comprising:
forming a contact plug fill in a dielectric layer;
applying a basic solution to said contact plug fill to etch a V-shaped trench under a defective fill; and
determining whether the region underneath the contact plug fill is etched by said basic solution.

21 (Original). The method of claim 20 including applying a basic solution which characteristically etches underneath the contact plug fill if the fill is defective.

22 (Original). The method of claim 20 wherein applying a basic solution includes exposing the contact plug fill to a solution that preferentially etches along the <111> crystallographic direction.

Claim 23 (Canceled).

24 (Original). The method of claim 20 including exposing the contact plug fill to an electric charge.

25 (Original). The method of claim 24 including using voltage contrast-based defect inspection.

26 (Original). The method of claim 20 including applying a contact to said contact plug fill.

27 (Original). The method of claim 21 including using electrical testing to determine if said fill is defective.

28 (Original). The method of claim 24 including using a secondary electron image to determine if said fill is defective.